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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/685,739
Filing Date: October 14, 2003
Appellant(s): LARSON ET AL.

MAILED
DEC 27 2007
GROUP 1700

Marc S. Hanish
For Appellant

SUPPLEMENTAL EXAMINER'S ANSWER

Pursuant to the remand under 37 CFR 41.50(a)(1) by the Board of Patent Appeals and Interferences on November 20, 2007 **for further consideration of a rejection**, a supplemental Examiner's Answer under 37 CFR 41.50(a)(2) is set forth below:

Reconsideration of 1.132 Affidavit:

The affidavit under 37 CFR 1.132 filed January 13, 2006 is insufficient to overcome the rejection of claims 1-20 based upon:

Claims 1-3, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Motoda; Takashi et al. (US 5,496,408 A).

Claims 4-7, 9, 10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoda; Takashi et al. (US 5,496,408 A) in view of Shinozuka; Shyuhei et al. (US 6,315,858 B1).

Claims 8, 11, 13, 14, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoda; Takashi et al. (US 5,496,408 A) and Shinozuka; Shyuhei et al. (US 6,315,858 B1) in view of Ohmi; Tadahiro et al. (US 5,313,982 A).

as set forth in the Examiner's Answer of June 1, 2007:

The Examiner's rationale for declaring the January 13, 2006 37 CFR 1.132 affidavit insufficient to overcome the pending rejections are believed to sustainable for at least the reasons already set forth by the Examiner in his March 9, 2006 office action. Further, the Examiner emphasizes that his rejection of claims 1-3, 17, 19, and 20 are 102(b) bar rejections as *anticipated* by Motoda; Takashi et al. (US 5,496,408 A). As such, an affidavit is ineffective in overcoming the rejection of said claims. With respect to the remaining claims rejected under 103(a) obviousness, the Examiner emphasizes that, as noted by the BPAI, the totality of Applicant's evidence in the affidavit is an assertion of a "term of art" in affiant's "area of work" for "fixed orifice". Such evidence is believed to be opinion evidence (716.01(b)) whose foundation is strictly based on affiant's narrow "area of work". However, as repeatedly emphasized by the Examiner, such a narrow interpretation was originally considered by the Examiner. The decision to err on the side of *the broadest reasonable interpretation* is supported by *ab initio* examination procedures because it is well established that claim terms are issued their "plain meaning" according to

MPEP 2111.01: Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003). The Examiner assesses the “ordinary skill in the art” as not necessarily the strict and narrow field of the “SAE Aerospace Applied Thermodynamics Manual” that is necessarily incredibly distant in practice, procedure, and principles to Applicant’s titled invention “Uniform Etch System”. Indeed, the “ordinary skill in the art” is the field of etching and deposition as supported by the class definitions of 156 and 118 respectively. Those “of ordinary skill in the art” in the field of Applicant’s endeavor, are artisans in etching, not in the aerospace industry. A “fixed orifice” in the field of etching and disposition, as supported by the class definitions of 156 and 118 respectively, is, as the Examiner has accorded, and repeatedly argued, – any piping of constant diameter. Along these lines, does affiant’s “area of work” refer to affiant’s department or the industry in general?

To avoid such challenges to the possibly allowable claims on the basis of *the broadest reasonable interpretation*, the Examiner applied the above guidance in 2111.01. The Examiner believes that the contents of Applicant’s affidavit is not commensurate with the broad scope of the claims. A plate need not necessarily be relatively thin.

Consideration of 35 USC 103(a) rejection:

The BPAI suggests considering a new rejection of claims 1-3 and 20 under 103(a) over the combined teachings of Motoda and Shinozuka.

The following rejection is presented upon such consideration:

Claims 1-7, 9, 10, 12, 15, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Motoda; Takashi et al. (US 5,496,408 A) in view of Shinozuka; Shyuhei et al. (US 6,315,858 B1). Motoda teaches an apparatus (Figure 7; column 10, line 23 - column 11, line 47) for providing a gas ("impurity gas" on 43a; Figure 7) from a gas supply ("impurity gas" on 43a; Figure 7) to at least two different zones (28, 50a-c, 46a-c; Figure 7; column 10, line 23 - column 11, line 47) in a process chamber (3; Figure 7), comprising: a flow divider ("T" near 43a; Figure 7) for providing a fluid connection to the gas supply ("impurity gas" on 43a; Figure 7), wherein the flow divider ("T" near 43a; Figure 7) splits gas ("impurity gas" on 43a; Figure 7) flow from the gas supply ("impurity gas" on 43a; Figure 7) into a plurality of legs (immediate upstream of "T" near 43a; Figure 7); a master leg (connecting 43a and 44; Figure 7) in fluid connection with the flow divider ("T" near 43a; Figure 7), wherein the master leg (connecting 43a and 44; Figure 7) comprises a master fixed orifice¹ (inherent, all piping have "orifice"; Compare with Applicant's Figure 19); and a first slave leg (connecting 43a and 50a; Figure 7) in fluid connection with the flow divider ("T" near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7), wherein the first slave leg (connecting 43a and 50a; Figure 7) comprises: a first slave leg (connecting 43a and 50a; Figure 7) valve (29); and a first slave leg (connecting 43a and 50a; Figure 7) fixed orifice (inherent, all piping have "orifice"; Compare with Applicant's Figure 19), as claimed by claim 1.

Motoda further teaches:

¹ Orifice *n* – an opening though which something may pass. Merriam-Webster's Collegiate Dictionary - 10th Ed. p.820

- i. The apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, further comprising: a second slave leg (connecting 43a and 50b; Figure 7) in fluid connection with the flow divider (“ T “ near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7) and the first slave leg (connecting 43a and 50a; Figure 7), wherein the second slave leg (connecting 43a and 50b; Figure 7) comprises: a second slave leg (connecting 43a and 50b; Figure 7) valve (29); and a second slave leg (connecting 43a and 50b; Figure 7) fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 2
- ii. The apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 2, further comprising: a third slave leg (connecting 43a and 50c; Figure 7) in fluid connection with the flow divider (“ T “ near 43a; Figure 7) and in parallel with the master leg (connecting 43a and 44; Figure 7), the first slave leg (connecting 43a and 50a; Figure 7), and the second slave leg (connecting 43a and 50b; Figure 7), wherein the third slave leg (connecting 43a and 50c; Figure 7) comprises: a third slave leg (connecting 43a and 50c; Figure 7) valve (29); and a third slave leg (connecting 43a and 50c; Figure 7) fixed orifice (inherent, all piping have “orifice”; see Footnote 1; Compare with Applicant’s Figure 19), as claimed by claim 3
- iii. A semiconductor chip formed using the apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, as claimed by claim 17 – Applicant’s “A semiconductor chip formed using the apparatus” is a recitation of intended use. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205

USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).

- iv. The apparatus, as recited in claim 18, further comprising a joining manifold (28; Figure 7) for combining output from the first slave leg (connecting 43a and 50a; Figure 7), the second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) connected between the first slave leg (connecting 43a and 50a; Figure 7), the second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) and a zone (28; Figure 7) of the at least two zones (28, 50a-c, 46a-c; Figure 7; column 10, line 23 - column 11, line 47) of the process chamber (3; Figure 7), as claimed by claim 19
- v. The apparatus, as recited in claim 3, further comprising a joining manifold (28; Figure 7) for combining output from the first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) connected between the first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), and the third slave leg (connecting 43a and 50c; Figure 7) and a zone (28; Figure 7) of a process chamber (3; Figure 7), as claimed by claim 20

Motoda does not teach

- i. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 3, further comprising: a fourth slave leg in fluid connection with Motoda's flow divider (" T " near 43a; Figure 7) and in parallel with Motoda's master leg (connecting 43a and 44; Figure 7), Motoda's first slave leg (connecting 43a and 50a; Figure 7), Motoda's second slave leg (connecting 43a and 50b; Figure 7), and Motoda's third slave leg (connecting 43a and 50c; Figure 7), wherein the fourth slave leg comprises: a fourth slave leg valve; and a fourth slave leg fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19); and a fifth slave leg in fluid connection with Motoda's flow divider (" T " near 43a; Figure 7) and in parallel with Motoda's master leg (connecting 43a and 44; Figure 7), Motoda's first slave leg (connecting 43a and 50a; Figure 7), Motoda's second slave leg (connecting 43a and 50b; Figure 7), Motoda's third slave leg (connecting 43a and 50c; Figure 7), and The fourth slave leg, wherein The fifth slave leg comprises: a fifth slave leg valve; and a fifth slave leg fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 4
- ii. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 4, further comprising a tuning gas system in fluid connection with at least one of Motoda's master leg (connecting 43a and 44; Figure 7), first slave leg (connecting 43a and 50a; Figure 7), second slave leg (connecting 43a and 50b; Figure 7), third slave leg (connecting 43a and 50c; Figure 7), fourth slave leg, and fifth slave leg, as claimed by claim 5

- iii. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 5, wherein The tuning gas system comprises: at least one tuning gas source; and at least one mass flow controller, as claimed by claim 6
- iv. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 6, wherein The tuning gas system is in fluid connection with Motoda's master leg (connecting 43a and 44; Figure 7) down stream from Motoda's master fixed orifice (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19), as claimed by claim 7
- v. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 8, wherein the first, second, third, fourth, and fifth leg fixed orifices (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19) are flat plate fixed orifices, as claimed by claim 9
- vi. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 4, the Motoda's first, second, third, fourth, and fifth leg fixed orifices (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19) are flat plate fixed orifices, as claimed by claim 10
- vii. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 3, wherein the first, second, and third leg fixed orifices (inherent, all piping have "orifice"; see Footnote 1; Compare with Applicant's Figure 19) are flat plate fixed orifices, as claimed by claim 12
- viii. Motoda's apparatus (Figure 7; column 10, line 23 - column 11, line 47), as recited in claim 1, wherein Motoda's master fixed orifice (inherent, all piping have "orifice"; see

The appellant must within **TWO MONTHS** from the date of the supplemental examiner's answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the rejection for which the Board has remanded the proceeding:

(1) **Reopen prosecution.** Request that prosecution be reopened before the examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit, or other evidence. Any amendment, affidavit, or other evidence must be relevant to the issues set forth in the remand or raised in the supplemental examiner's answer. Any request that prosecution be reopened will be treated as a request to withdraw the appeal. See 37 CFR 41.50(a)(2)(i).

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. If such a reply brief is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened under 37 CFR 41.50(a)(2)(i). See 37 CFR 41.50(a)(2)(ii).

Extensions of time under 37 CFR 1.136(a) are not applicable to the **TWO MONTH** time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

A Technology Center Director or designee has approved this
supplemental examiner's answer by signing below:


GREGORY MILLS
QUALITY ASSURANCE SPECIALIST

² Orifice *n* – an opening though which something may pass. Merriam-Webster's Collegiate Dictionary - 10th Ed.